BROOKHAVEN BULLETIN
Vol. 51 - No. 3 January 17, 1997
BROOKHAVEN NATIONAL LABORATORY

BNL 50th Anniversary Distinguished Lecture

Cronin Takes Cosmic View of Cosmic Rays

As part of a yearlong 50th anniversary celebration, the Laboratory is offering the BNL 50th Anniversary Distinguished Lecture Series.

Throughout 1997, this series will feature leaders in their fields speaking on various scientific topics. The talks are open to the public free of charge.

James Cronin

Cosmic rays — atomic nuclei from space ranging from hydrogen to iron — are constantly striking the Earth with a wide range of energies. Though they are screened during their passage through the atmosphere, cosmic rays are natural sources of radiation, even responsible for the fact that people who live in mountainous regions or make frequent airplane trips receive a measurable extra dose of radiation annually.

The bulk of the cosmic rays arrive at energies below about one million billion (10^{15}) electron volts. But, on rare occasions, a hydrogen nucleus — a proton — strikes the Earth with an energy some 100 million times the energy that can be produced by the world's most powerful accelerator — around 100 billion billion (10^{20}) electron volts. This is a macroscopic energy — equivalent to Steffi Graf's first serve — in a microscopic particle.

A trillion trillion (10^{24}) of these protons weigh less than one tenth of an ounce. So how does nature, even with her arsenal of powerful astrophysical objects — quasars, galaxy clusters, black holes, etc. — accelerate them to such high energies?

One physicist who is very interested in answering that question is Nobel laureate James Cronin, University of Chicago, who, on Thursday, January 23, will be the first speaker in the BNL 50th Anniversary Distinguished Lecture Series. His discussion of "The Highest Energy Cosmic Rays," will begin at 4 p.m. in Berkner Hall.

After offering some historical background, Cronin will discuss the puzzle posed by these extraordinary, high-energy cosmic rays, concluding with a description of worldwide efforts to solve the puzzle.

James Cronin is no stranger to Brookhaven: While on the physics faculty of Princeton University in 1963, he and Val Fitch performed groundbreaking research at BNL's high-energy particle accelerator, the Alternating Gradient Synchrotron. Subsequently, the two physicists were awarded the 1980 Nobel Prize in Physics for their discovery — a basic physics principle known as CP violation.

Cronin earned his M.S. and Ph.D. degrees in physics from the University of Chicago in 1953 and 1955, respectively. From 1952-55, he was a National Science Foundation Fellow, and, for the next three years, he worked at BNL's Cosmotron, the newest particle accelerator of the time. In 1958, he joined the physics faculty of Princeton, and he remained there until 1971, when he assumed his current position as University Professor of Physics at the University of Chi-

(continued on page 2)

Blume Named APS Editor-in-Chief

Senior Physicist Martin Blume, who had stepped down on October 1 as BNL's Deputy Director after 12 years in that position, has been elected to a five-year term as Editor-in-Chief of the American Physical Society (APS), effective January 1.

Martin Blume

As a result, Blume will divide his time between the APS and BNL's Physics Department, where he pursues research in theoretical solid-state physics topics, including magnetism, phase transitions, slow-neutron scattering and synchrotron radiation.

With 40,000 members, APS is the largest professional organization of physicists in the world. Headquartered in College Park, Maryland, APS is operated by three officers: a treasurer, an executive officer and an editor-in-chief.

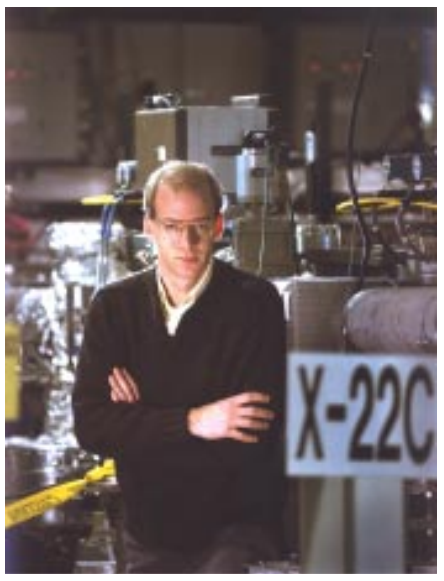
The society publishes the 103-year-old *Physical Review* family of journals, which are five publications covering the major areas of physics, as well as *Physical Review Letters* and *Reviews of Modern Physics*. Among the most prestigious peer-reviewed publications in the world of science, *Physical Re-*

(continued on page 2)

John Hill Wins Presidential Early Career Award

John Hill, an associate physicist in the Physics Department, is one of 60 researchers from around the nation to be honored with the Presidential Early Career Award for Scientists and Engineers. The newly created award recognizes outstanding scientists and engineers in the early stages of their careers who show exceptional potential for leadership in their fields.

John Gibbons, Assistant to the President for Science and Technology, and Charles Curtis, Deputy Secretary of Energy, presented the Presidential Award to Hill at a White House ceremony on December 16.



Roger Stoutenburgh

John Hill at the National Synchrotron Light Source

On that same date, at a ceremony held at U.S. Department of Energy (DOE) headquarters in Washington, D.C., Martha Krebs, Director of DOE's Office of Energy Research (OER), presented Hill with a Young Scientist Award. Newly instituted by OER, this award recognizes extraordinary scientific and technical achievement. Out of six researchers so honored, four have gone on to receive the Presidential Award.

"This is a big honor, and I'm delighted that I was chosen for both of these awards," Hill said. "I would like to thank my many collaborators who helped make the experiments so productive and, in particular, Doon Gibbs of Physics and Chi-Chang Kao of the National Synchrotron Light Source [NSLS] for their support and contributions to this research."

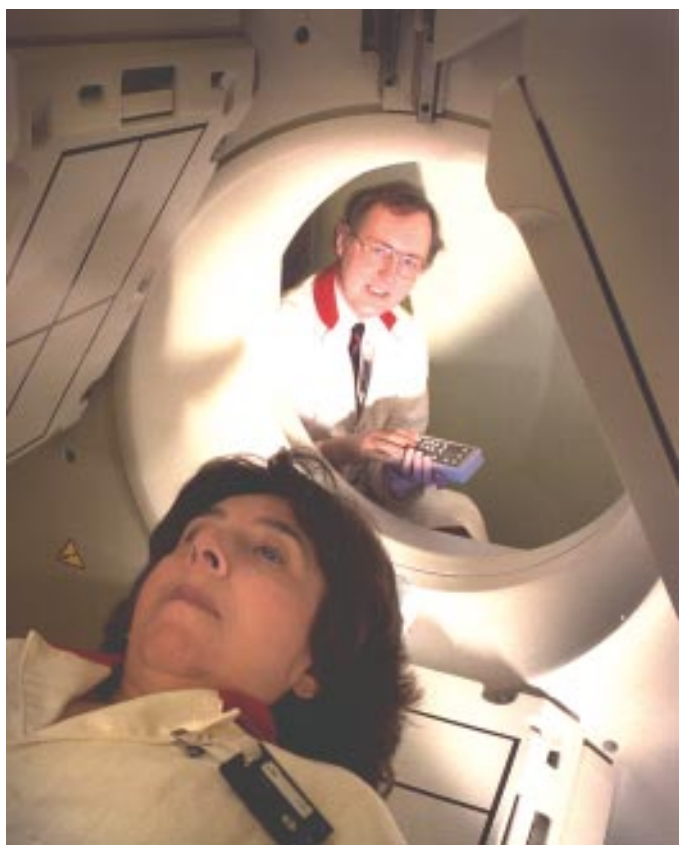
The citations for both awards honor Hill for basic research in physics, namely, "for elucidating the role of crystalline order in electron dynamics and of disorder in magnetic phase transitions, and for continuing development of magnetic and inelastic x-ray scattering techniques in the study of condensed matter."

At the NSLS and the High Flux Beam Reactor, Hill investigates how magnetism changes with temperature at a microscopic level. His interests include magnetic phase transitions. Phase transitions are changes in the ordering of a material from one type to another. An example is a crystal melting, when the atoms leave their well-ordered patterns and move in a random way.

In addition, Hill studies the motion of electrons in metals, using a newly developed technique, called inelastic scattering, at the NSLS.

(continued on page 2)

BNL Lecture: IntroSPECTive on Medical Imaging



Roger Stoutenburgh

John Gatley demonstrates how a doctor would position a patient in the SPECT scanner, The "patient" is Medical Department volunteer Beatrice Pyatt.

By providing a "window" into the functioning body or brain of a patient, nuclear medical imaging allows doctors to diagnose damage or disease more easily. BNL is internationally known for its work in one form of nuclear medical imaging, Positron Emission Tomography (PET). The high cost of PET, however, is a limiting factor for routine clinical use.

An alternative imaging technique is Single Photon Emission Computed Tomography, known as SPECT, which is clinically used in thallium heart-stress scans, or in bone scans to look for breaks or bruises. SPECT is affordable for many hospitals and has unique, valuable features — but PET produces better images in most situations.

One of the scientists working on new methods to use SPECT is Chemist John Gatley of the Medical Department. To discuss some aspects of SPECT research and its potential, he will deliver the 323rd Brookhaven Lecture on Wednesday, January 22. Gatley, who will be introduced by Medical Department Chair Nora Volkow, will speak on "Neuro-Imaging With SPECT: Retrospect and Prospect," beginning at 4 p.m. in Berkner Hall.

An overview of medical-imaging methods, and SPECT in particular, will form the first part of Gatley's talk.

He will continue by explaining the importance of developing new radiotracers — radioactive substances that, after injection into a patient, settle preferentially in the organ of interest. A fraction of the photons these radiopharmaceuticals emit is detected by a revolving camera to form the basis of the SPECT image.

Part of Gatley's research in this field focuses on AM281, a compound developed in conjunction with scientists at the

(continued on page 2)

Four Brookhaven Scientists Join the Ranks of APS Fellows

Four BNL scientists were honored by the American Physical Society (APS) at its November meeting, in being named Fellows of the 41,000-member society.

The four are: Chemist Louis DiMauro, Chemistry and National Synchrotron Light Source (NSLS) Departments; Physicist Doon Gibbs, Physics Department; Physicist Michael Murtagh, Physics; and Physicist Thomas Roser, Alternating Gradient Synchrotron (AGS) Department.

Formed in 1899, the APS is dedicated to advancing physics and spreading knowledge and information about its fields. In addition to organizing scientific meetings, the society offers many educational and public informational programs.

Election as an APS Fellow is peer recognition of outstanding contributions to physics through original research and publication; significant and innovative applications of physics to science and technology; and/or physics teaching or service to the society. No more than one-half of one percent of the society's members may be elected Fellows.

Nominated by the APS Atomic, Molecular & Optical Division, **Louis DiMauro** was cited: "For developing and utilizing high repetition rate, short-pulse lasers for pioneering studies which have greatly advanced the fundamental understanding of multiphoton processes in atoms and molecules."

To examine with unprecedented sensitivity the physics associated with the interaction of matter with super-intense laser fields, DiMauro and his group developed lasers with unique output characteristics. Recently, he has been involved with planning a free-electron laser user facility for the NSLS.

Roger Stoutenburgh

New Fellows of the American Physical Society include BNL scientists: (clockwise from top right) Michael Murtagh, Doon Gibbs, Thomas Roser and Louis DiMauro.

Having served as a research collaborator during the summer of 1986, Louis DiMauro returned to BNL's Chemistry Department on January 1, 1988, as an assistant chemist. Promoted to an associate chemist in October 1990, DiMauro became a chemist in September 1992. Since November 1996, he has held a joint appointment in Chemistry and the NSLS.

"For development of x-ray magnetic scattering techniques and contributions to the understanding of the structure and phase behavior of metal surfaces," **Doon Gibbs** had been proposed as a Fellow by the Division of Condensed Matter Physics.

Performing most of his work at the NSLS, Gibbs focuses his research on x-ray scattering studies of magnetic materials, and of the structure and phase of surfaces. In 1985, Gibbs and three colleagues were given the Outstanding Scientific Accomplishment in Solid State Physics award by the U.S. Department of Energy for their early x-ray magnetic scattering experiments on holmium.

Leader of Physics' X-Ray Scattering Group since 1991, Doon Gibbs came to BNL in January 1983, as an assistant physicist. He was promoted to an associate physicist in 1984, and, in 1986, to a physicist.

Michael Murtagh was put forward by the APS Division of Particles & Fields: "For significant contributions to the study of neutrino interactions including charm and strange [particle] production, elastic scattering of electrons and protons, and neutrino oscillations."

Michael Murtagh arrived at BNL in 1970, as a guest junior research associate. In 1973, he joined the staff of the Physics Department as a research associate. Named an assistant physicist in 1975, Murtagh became an associate physicist in 1977 and, in 1979, a physicist. After serving as Associate Chair, 1991-93, he has been Deputy Chair of the Physics Department since 1993.

In his first BNL experiments, Murtagh worked on neutrino-physics research using bubble chambers. From 1978 through 1986, he worked on Experiment 734 at the AGS, studying elastic neutrino scattering from electrons and protons, and searching for neutrino oscillations.

Since becoming part of Physics' administration, Murtagh has been working to continue high-quality high-energy research within the department.

The Physics of Beams Division recommended **Thomas Roser** for a fellowship: "For contributions to the accelerator physics of polarized proton beams, in particular, the successful demonstration of the principle of the Partial Siberian snake."

AGS Accelerator Division Head since 1994, Thomas Roser first came to the Lab as a guest research associate, stationed here by the University of Michigan in 1984. In 1988, he published the theory of using a magnet assembly called a partial Siberian snake to overcome the problem of keeping polarized protons polarized.

After joining the AGS staff as an associate physicist in 1991, he became a physicist in 1993. Then, in 1994, the installation of a partial Siberian snake at the AGS resulted in the acceleration of a polarized proton beam to the unprecedented energy of 25 billion electron volts. Roser is now working on the Siberian snake design for the Relativistic Heavy Ion Collider.

— Marsha Belford

In Memoriam

Mildred Bennett, a Supply & Materiel Administrator in the Administrative Support Division, died on December 20, after a long battle with breast cancer. She was 51.

Mildred Bennett

Bennett came to the then Supply & Materiel (S&M) Division on December 3, 1979, as a clerk-typist assigned to S&M's Receiving Section.

"Millie was a diligent and eager worker," recalls S&M Manager Michael Guacci. "Since her talents flourished, she progressed quickly through the clerical classifications of general clerk and S&M clerk, and, in September 1988, Millie was promoted to S&M Administrator."

As such, Bennett was responsible for supervising S&M's Requisition Section, which includes inventory replenishment, catalog preparation and distribution, and quality control. Due to her illness, she left the Lab on long-term disability on January 26, 1996.

Speaking for S&M, Guacci said, "Millie was one of those rare people who had nothing bad to say about anyone and about whom only good could be said. She was never too busy to lend a helping hand, to give support to those in need, or to be there just to listen. Millie's loss as a coworker is a blow to all of us in S&M, and we miss her smile and her upbeat outlook on life, but, most of all, her friendship."

A resident of Shirley, Mildred Bennett is survived by: her son William Schaming of Pennsylvania, stepdaughter Carolyn Bennett of Virginia, and stepdaughter Barbara Calle, who is a custodian in the Plant Engineering Division. In November, Bennett was predeceased by her husband John Bennett, who had also worked in S&M.

— Marsha Belford

BNL Lecture (cont'd.)

University of Connecticut to image brain receptors for marijuana. As he will relate, marijuana, an illicit drug with actions that are poorly understood, is taken up in the brain by receptors that are especially well-suited for study using SPECT.

Gatley will detail the BNL team's interesting preliminary results involving radioactive AM281 and related substances, which might be used to study the consequences of drug addiction. Related work, he will say, implies the possibility of medicinal uses of these substances. For instance, drugs might be developed to help prevent memory loss.

Educated in England, Gatley received his B.Sc. in chemistry from the University of Durham in 1970, and his M.Sc. in microbiological chemistry and Ph.D. in biochemical pharmacology from the University of Newcastle-upon-Tyne, in 1971 and 1975, respectively.

From 1975-1985, he worked at the University of Wisconsin-Madison, spending six months on sabbatical at Argonne National Laboratory during 1984. Gatley left Wisconsin as an associate professor to join the University of Chicago's Radiology Department until 1989. He arrived at BNL's Chemistry Department that same year, then moved to Medical in 1994.

Gatley's professional activities include ongoing, long-term work on committees for the United States Pharmacopoeial Convention, the National Institute on Drug Abuse and the National Institutes of Health, as well as his sitting on the Institutional Review Board and chairing the Radioactive Drug Research Committee, both from 1989-1995. He is also the Medical Department's liaison scientist for collaborations with the National Aeronautics & Space Administration.

After the lecture, all are invited to join Gatley for discussion and refreshments. Those wishing to have dinner with the speaker at a restaurant off site should call Amalia Ruggiero, Ext. 2837, before noon on Wednesday, January 22. — Liz Seubert

Anniversary Lecture (cont'd.)

cago. He was a member of BNL's Physics Visiting Committee, 1981-84.

In addition to the Nobel Prize, Cronin and Fitch shared two other major awards for discovering CP violation: the Research Corporation Award, 1968, and the John Price Wetherill Medal of the Franklin Institute, 1975. Also honored with the U.S. Department of Energy's Ernest O. Lawrence Award in 1977, Cronin was named *Docteur Honoris Causa* at *l'Université Pierre et Marie Curie*, in 1994.

Cronin is a member of the National Academy of Sciences, the American Academy of Arts and Science, and the American Physical Society, for which he served as Chairman of the Division of Particles and Fields in 1985.

John Hill (cont'd.)

In metals, electrons do not remain bound to individual atoms, as they do in other materials, but move freely between them in a liquid-like state. This is the reason why metals are good conductors of heat and electricity.

The behavior of this electron liquid is extremely difficult to calculate, and Hill's experiments test theoretical predictions in a new way. The study of such complicated systems, known as many-body problems, is important to many areas of physics.

John Hill earned a B.Sc. in physics from Imperial College in London, United Kingdom, in 1986, and a Ph.D. in physics from the Massachusetts Institute of Technology in 1992. That same year, he joined the staff of the Physics Department at BNL, and, in 1993, he became an assistant physicist. In 1995, he was promoted to associate physicist. — Diane Greenberg

Martin Blume (cont'd.)

view's journals are compiled by an editorial staff of more than 100, who are located in an office off the William Floyd Parkway in Ridge.

As APS Editor-in-Chief, Blume is in charge of these journals and their staffs. His responsibilities include ensuring the quality of APS journals, leading APS's efforts in electronic publishing, working with senior editors to set journal policies, and handling ethics cases and their appeals involving authors.

Blume comes to the office of editor-in-chief with a three-point plan: to strengthen the financial viability and contain the costs of the society's journals, to make all APS publications fully available on the information superhighway, and to extend the international prominence of all APS publications.

Martin Blume has served the APS extensively, as Chair of the Panel on Public Affairs and Chair of the Nominating Committee, as well as membership on the APS Council, Executive Board and Forum on Physics & Society. In addition, he had a place on the editorial board of *Physical Review*.

In 1981, Blume received the E.O. Lawrence Award for his scientific leadership in solid-state physics. Elected a Fellow of the American Academy of Arts & Sciences, Blume is a Fellow of the American Association for the Advancement of Science and the New York Academy of Sciences, as well as the APS.

Martin Blume is the second BNL physicist to serve as APS Editor-in-Chief: The first was the late Samuel Goudsmit, who had held that position from 1966 to 1974. — Marsha Belford

Two Employees, One Guest Among *Beacon-Record*'s 1996 Standouts

Two BNL employees and one guest were among 12 people chosen by the *Village Beacon-Record* as its Men and Women of the Year 1996.

Robert Casey, who is Head of BNL's Safety & Environmental Protection Division, was honored as the environmentalist of the year. John Searing, who is Special Assistant to BNL's Associate Director for Administration, was selected as 1996's good neighbor.

And the *Beacon-Record's* choice for scientist of the year was guest senior physicist Paul Grannis, who headed the DZero high-energy physics experiment, which involves a 42-institution collaboration including BNL and which co-discovered the top quark in 1995.

Serving North Shore Communities from Miller Place in the west to Wading River in the east, the *Village Beacon-Record* annually honors ". . . those who have contributed in a significant manner to our community. . . . These are the people who go that extra mile to improve the quality of our lives," as it was noted on the front page of the December 26, 1996, issue.

According to the newspaper, **Robert Casey** was "flabbergasted" to learn that he had been chosen as the environmentalist of the year. The reason, the paper quoted Casey: "My job is to worry about the operation of the Laboratory to make sure the environment is protected. I'm well aware that some folks feel that I haven't done my job. I feel we have. . . ."

Robert Casey

Casey was commended by the *Beacon-Record* for his oversight of the Lab's programs for environmental protection, hazardous waste management, occupational safety, radiation protection, and worker safety training.

In addition, Casey was lauded for his openness with the public regarding the Lab's environmental problems, and his welcoming of the input on the Lab's environmental effort by the Suffolk County Task Force on BNL, as well as from other local, county and federal organizations.

Certified by the American Board of Health Physics, Robert Casey came to BNL as a health physicist in 1965, and, since 1988, he has served as his division's chief. In 1994, Casey earned the William McAdams Outstanding Service Award of the American Board of Health Physics.

The *Beacon-Record* selected **John Searing** as its 1996 good neighbor, citing his being a volunteer fire fighter for the past 11 years and praising his service to the Rocky Point Fire Department, of which he is now chief.

As the paper noted, during the 1994 Rocky Point wildfire, "[A]t times, [Searing] was in charge of the communications unit directing the activities of more than 50 firefighting units."

As chairman of the Pine Barrens Commission's Wildfire Task Force, Searing directs 30 organizations in planning a coordinated response to any future large-scale wildfires.

John Searing

In addition, the newspaper applauded Searing for conducting first-aid classes for school children, his involvement in Boy Scout activities and his service to St. Mark's parish.

John Searing started on site at the Brookhaven Area Office of the U.S. Department of Energy in 1989, and, in 1993, he joined the Lab's staff in his present position.

Paul Grannis was named scientist of the year "[f]or his distinguished research and, in particular, for his leadership of [the DZero Collaboration]."

Until recently, Grannis was the spokesman of this collaboration, which, since its inception in 1983, has included members of BNL's Physics Department. Under Grannis, DZero built one of the two major detectors at the Tevatron Collider of Fermi National Accelerator Laboratory.

In March 1995, the collaboration and its rival experiment announced their co-discovery of the top quark, a type of elementary particle that had been searched for since 1977. As the *Beacon-Record* pointed out, this is a "major contribution to human understanding of the fundamentals of the universe."

Paul Grannis joined the Physics Department of the State University of New York at Stony Brook in 1966, and, in 1975, he became a professor there. Within BNL's Physics Department, Grannis has been a guest physicist since 1966. Recently, he became the Chairman of the 3,000-member Division of Particles & Fields of the American Physical Society.

— Marsha Belford

Diversity Visa-98

For the fourth year, the U.S. Department of State will hold a visa lottery that gives certain foreign nationals a way to immigrate to the U.S. without having family or employee sponsorship.

Eligible foreign nationals are from: all African countries (21,179 visas available); Asian countries except for China, India, Philippines, South Korea, Taiwan, and Vietnam (7,280; note: Hong Kong *is* eligible); European countries except for Poland and the United Kingdom (23,213 visas); in North America, only the Bahamas (8 visas); all Oceania countries (844); and countries in South & Central America and the Caribbean except Colombia, the Dominican Republic, El Salvador, Jamaica and Mexico (2,476 visas).

Registration applications for this lottery will be accepted only between noon Eastern Standard Time (EST) on Monday, February 3, and noon EST on Wednesday, March 5. For more information, contact BNL's Office of Scientific Personnel, Ext. 5877.

Arrivals & Departures

Arrivals

Christopher D. Cleary.....Central Shops
Osbourne J. Lawrence.....Plant Eng.
Sergei V. Lymar.....Chemistry

Departures

This list includes all employees who have terminated from the Lab, including retirees:

Dmitri N. Bassov.....Physics
Kevin Collins.....Information Serv.
Frank R. Norton.....Admin. Support

BROOKHAVEN BULLETIN

Published weekly
by the Public Affairs Office
for the employees of
BROOKHAVEN NATIONAL LABORATORY

ANITA COHEN, Editor
MARSHA BELFORD, Assistant Editor

Bldg. 134, P.O. Box 5000
Upton NY 11973-5000
Tel. (516) 344-2345; Fax (516) 344-3368

World Wide Web:
http://www.pubaf.bnl.gov/~pubaf/bulletin.html

The Brookhaven Bulletin is printed on paper containing at least 50 percent recycled materials, with 10 percent post-consumer waste. It can be recycled.

BNL & BNLers Spend Many Millions on Long Island

Out of BNL's total budget of $407 million for fiscal year 1996 (FY96), the Laboratory used almost $29 million to purchase supplies and services from Long Island businesses.

In addition, BNL's approximately 3,200 employees improved the local economy during FY96 by spending most of their earned income on Long Island. Brookhaven's operating budget for FY96 was $302 million, with 59 percent being spent on salaries and wages, and 21 percent going to fringe benefits.

The Lab made 10,095 purchases on Long Island in FY96, with 7,374 totaling more than $23.3 million going to businesses in Suffolk County, and 2,721 amounting to about $5.6 million benefiting firms in Nassau County.

Mary-Faith Healey, Manager of the Division of Contracts and Procurement, said, "BNL is proud to be an active member of the Long Island business community. By procuring goods and services through Long Island-based firms, the Laboratory exhibits its partnership with the Long Island economy."

New construction and maintenance of older buildings, as well as the purchase of computer hardware and electrical equipment, accounted for many of BNL's purchases during FY96.

For instance, the Lab contracted with Coram-based Angelo Capobianco, Inc. — the number-one vendor this fiscal year — to build a 12,000-square-foot addition to Bldg. 815, a 50,000-square-foot building equipped with laboratories and offices of the Department of Applied Science (DAS) .

When this $2.5-million addition is completed, probably by the end of April, DAS staff now housed in Bldgs. 426 and 194 will move to 815, to consolidate space for programs in environmental chemistry, such as the study of ozone depletion and the electrochemistry of fuel cells.

The addition will also include modifications to make Bldg. 815 handicapped-accessible.

BWIS Meeting

Tuberculosis: Modern-Day Resurgence

Tuberculosis (TB) kills 3,000,000 people worldwide annually, including 300,000 children. Though especially devastating in developing countries, TB is also resurgent in industrialized countries, where it was once thought to be vanquished.

TB is spread through the air. When someone with infectious tuberculous diseases coughs, sneezes, talks or expectorates, the TB bacilli in that person's lungs are propelled into the air. Individuals in close contact who breathe in the same air may become infected unknowingly.

Thus, the public-health system has a major responsibility to recognize this threat and take appropriate preventive measures. Abby Greenberg, Director of the Division of Disease Control in the Nassau County Department of Health (NCDH), will discuss tuberculosis and its public health impact at the next Brookhaven Women in Science (BWIS) Meeting. Her talk on "Tuberculosis in Buses, Bars and Banks" will begin at noon on Wednesday, January 22, in Room C, Berkner Hall. All are invited; please bring your lunch.

At 1:30 p.m. that same day, Abby Greenberg will deliver a tuberculosis update in a Medical Department seminar in Bldg. 490.

Greenberg was awarded her M.D. degree at the Downstate Medical Center of the State University of New York in 1959. She joined the NCDH in 1968, as a clinician. After a series of increasingly prestigious appointments over the next 26 years, including Acting Commissioner of NCDH, she was named to her present position in 1994.

A diplomate of the American Board of Pediatrics, Greenberg is also an attending physician in the Department of Pediatrics at the Nassau County Medical Center. Additionally, she is an assistant professor in the Department of Preventive Medicine at the State University of New York at Stony Brook.

Speakers Bureau

The following speakers have given talks on behalf of the Laboratory:

- **Gary Schroeder**, SEP; **Jeff Williams**, SEP: Lake Panamoka Civic Association, "Air Emissions From BNL and How We Monitor Them," August 10.
- **R.C. Anderson**, DO retired: Second Tuesday Club of Southampton, "Energy and the Environment," August 13.
- **Michael O'Brien**, SEP: Rotary Club of East Hampton, "BNL's Environmental Issues," September 23.
- **Kara Villamil**, DO: Moriches Rotary Club, "BNL's Environmental Issues," October 24.
- **Jane Hodgkinson**, Med.; **Mona Rowe**, DO: L.I. Adult Brain Tumor Support Group of Suffolk County, "BNCT at BNL," October 24.
- **R.C. Anderson**, DO retired: Institute for Learning in Retirement, SUNY at Farmingdale, "Energy & Information: Keys to Survival," October 31.
- **Steve Musolino**, SEP; Unitarian Universalist Fellowship, Bellport, "Radiation: Putting It in Perspective," November 3.
- **Anne Meinhold**, DAS: American Association of University Women, "Risk Assessment & Environmental Decisions," November 12.
- **Gail Schuman**, Bio.: Career Day at Shoreham-Wading River Middle School, "Careers in Biology," November 13.
- **Lino Miceli**, Phys.: Reilly Avenue Elementary School, Riverhead, "Physics Demonstrations," November 20.
- **James Guppy**, DAT: Mt. Sinai High School Career-Awareness Program, "Careers in Science," December 4.
- **Stephen Dewey**, Chem.: Eastport High School SEPTA Program, "How Drugs Affect the Brain," December 4.
- **John Andrews**, DAS; **Fred Horn**, SEP; 32nd Annual Shelter Island Science Fair, Science Fair Judges, December 13.
- **Don Gardner**, Phys.: Westhampton Beach High School Career Day, "Careers in Math & Engineering," December 18.

In Stormy Weather
Call: 344-INFO*
Dial the letter O, *not* zero!

Here's to a Better You!

If you are looking for a weight-loss program designed around you, then consider "A Better You!"

Offered by the Health Promotion Program of the Occupational Medicine Clinic, A Better You! is a ten-session program designed and supervised by a registered dietitian and nutritionist, stressing lifestyle changes, not caloric deprivation. It will meet noon to 1 p.m. on Thursdays, beginning January 23.

During two of the sessions, participants will have private consultations with the dietitian or nutritionist, to assess their individual needs and customize their weight-loss program. The remaining sessions will focus on nutrition, healthy cooking, dining-out techniques, food shopping strategies, exercise, stress reduction, and more. Progress will be monitored by computerized body-composition analysis, and by weighing and measuring each participant.

The per-person cost is $140. For more information or to register, call Mary Wood, Ext. 5923.

Tread Safely

The Safety Shoe Office located in Bldg. T-88 will be closed on Wednesday, January 22. The office will reopen on Wednesday, January 29.

Bowling

Red & Green League

D. Fisher 254/247/213/714 scratch, K. Asselta 205/204/201/610 scratch, R. Mulderig 247/223/660 scratch, O. Mirjah 254/202/614 scratch, J. Goode 235/222/624 scratch, R. Eggert, 217/202/610 scratch, K. Koebel 216/200, E. Larsen 208/204, H. Arnesen 253/611 scratch, A. Pinelli 200, G. Weresnick 200.

Congratulations to the Portsiders, winners of the first half.

White & Purple League

B. Tozzi 213/208/188/609 scratch series, R. Raynis 242/192, J. Zebuda 215/209, E. Meier 215/198, M. Guacci 211/188, B. Mullany 212/208, Don King 197/192/182, M. G. Meier 190/181, N. Besemer 189/180, K. Conkling 223, B. Guiliano 220, E. Sperry IV 210, Doug Fisher 206, R. Vega 183, M. DiMaiuta 180, P. Manzella 180.

The Odd Balls are the winners of the first half — congratulations!

Deperately Seeking Substitutes

If you bowl and would like to fill in occasionally for a league bowler, call Debbie Botts, Ext. 3888.

Computing Corner

The Computing & Communications Division (CCD) offers the following:

Computer Training

Seats are still available for the following classes:

Feb. 4 & 6*	beg. ACCESS
Feb. 5	basic Windows 3.1
Feb. 11	Windows 95
Feb. 12	beg. EXCEL
Feb. 13	beg. PowerPoint
Feb. 18 & 20*	int. ACCESS
Feb. 19	basic Windows 95
Feb. 25	int. EXCEL

* two-day class

For each day of training, the fee is $177.75 per person. To register, send a completed training request form (available from your training coordinator or Julie Guhring, Ext. 5196) with an ILR for the appropriate amount to Pam Mansfield, Bldg. 515.

HTML Training

Because of the overwhelming response to the Introduction to HyperText Markup Language (HTML) course, CCD will offer another class on February 26. To learn basic Web page publishing and linking, register for this one-day class by sending an ILR for $210 to Pam Mansfield, Bldg. 515, by February 3.

T-Shirts Commemorate Black Scientists

With the Laboratory observing the birthday of Martin Luther King Jr. next Monday, and with Black History Month coming in just two weeks, it's an appropriate time to commemorate America's black inventors and scientists who have made valuable contributions to our world.

Five of them — botanist and agricultural scientist George Washington Carver, physician and scientist Charles Drew, organic chemist Percy Julian, developmental biologist Ernest Just and electrical engineer Lewis Latimer — are pictured on T-shirts now available through Museum Programs in the Public Affairs Office.

At $10 each, the black, 100 percent cotton T-shirts come in adult sizes large and extra-large, and can be purchased at either the Museum Programs office in Bldg. 184, Ext. 4049 (call first), or at the BERA Sales Office in Berkner Hall.

Note to Employees:

Attendance at lectures, meetings and other special programs held during normal working hours is subject to supervisory concurrence.

Note to Diners

BNL will be closed on Monday, January 20, in observance of Martin Luther King Jr.'s birthday. Throughout the three-day weekend, the Cafeteria will offer snack-bar service from 9 a.m. to 2 p.m. The Brookhaven Center will be closed on Saturday and Sunday, January 18 & 19, but will reopen on Monday, January 20, at 5 p.m. until 9 p.m.

Defensive Driving

From February through December, the Safety & Environmental Protection Division will again offer courses in defensive driving that are designed and approved by the National Safety Council. By completing this course, you will get a 10 percent discount on your car's collision and liability insurance over three years. And, if you have incurred points on your driving record within the preceeding 18 months, then up to four points will be deducted.

The six-hour courses will be offered either from 6 to 9 p.m. on two weekdays or from 9 a.m. to 3:30 p.m. on a Saturday. Open to all BNL employees, guests and their family members, the course costs $19.95 per person.

To register, send a note with your name, building number and extension to Ronnie Zambelli, Bldg. 129A.

Classified Advertisements

Placement Notices

The Laboratory's placement policy is to select the best-qualified candidate for an available position. Consideration is given to candidates in the following order: (1) present employees within the department/division and/or appropriate bargaining unit, with preference for those within the immediate work group; (2) present employees within the Laboratory; and (3) outside applicants. In keeping with the Affirmative Action plan, selections are made without regard to age, race, color, religion, national origin, sex, handicap or veteran status.

Each week, the Human Resources Division lists new placement notices, first, to give employees an opportunity to request consideration for themselves through Human Resources, and second, for general recruiting under open recruitment. Because of the priority policy stated above, each listing does not necessarily represent an opportunity for all people.

Except when operational needs require otherwise, positions will be open for one week after publication.

For more information, contact the Employment Manager, Ext. 2882, or call the JOBLINE, Ext. 7744 (344-7744), for a complete listing of all openings.

Current job openings can also be accessed via the BNL Home Page on the World Wide Web. Outside users should open "http://www.bnl.gov/bnl.html", then, under "Information," select "Jobs." For scientific staff openings, select "Scientific Personnel Openings"; for all other vacancies, select "General Personnel Openings."

SCIENTIFIC RECRUITMENT - Doctorate usually required. Candidates may apply directly to the department representative named.

SCIENTIFIC POSITIONS - A research center focusing on the physics program of the Relativistic Heavy Ion Collider (RHIC), hard QCD/spin physics, and relativistic heavy-ion physics is expected to be established by the Institute of Physical and Chemical Research, Japan (RIKEN) at BNL. The members of the Center will be Research Associates (two-year appointments), RIKEN-BNL Fellows (up to five-year appointments) and Visiting Scientists. Frequent workshops are planned. During the first year, beginning in fall 1997, several positions for theorists in the above categories are expected to be offered. Members of the Center will work closely with the existing high-energy and nuclear-physics groups at BNL. Contact: Peter Bond, Physics Department.

LABORATORY RECRUITMENT - Opportunities for Laboratory employees.

DD 4035. CARPENTER POSITIONS - (one regular position, one term position, one temporary position) Under minimum supervision lays out, constructs, modifies and maintains buildings and component parts from construction drawings, rough sketches or verbal instructions. Works with wood, wood substitutes and combination materials and flooring, roofing and wall materials. Uses hand, portable and fixed tools common to building construction trades. Installs cabinets, door frames, window glass, interior finishes, and hangs doors. May perform Cabinetmaker duties as required. Plant Engineering Division.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside candidates.

NS 0599. ENGINEERING POSITION - (term appointment) Requires an MS/PhD in electronic engineering and significant experience in the management of the production of front-end electronics (FEE) for high-energy and nuclear-physics detectors. Responsibilities include assisting the PHENIX FEE Manager in providing technical, schedule and cost oversight for PHENIX front-end electronics procurement, production, testing and commissioning; monitoring progress of engineers; and assuring integration of FEE with PHENIX data-acquisition subsystems. RHIC Project.

NS 4707. PROGRAMMER/SYSTEMS ANALYST POSITION - Requires a bachelor's degree in computer science or related discipline and several years' hands-on experience. Experience with Visual Basic, Microsoft Office and Windows environment required; conceptual knowledge of two-tier architecture, relational databases and PeopleSoft a plus. Will be responsible for the implementation of the PeopleSoft accounts-receivable module, as well as the selection and implementation of a new travel package. Financial Services Division.

NS 4708. PROGRAMMER/ANALYST POSITION (QA) - Requires a bachelor's degree in computer science or related discipline, and several years of quality-assurance experience testing Windows-based applications in a client/server environment. Working knowledge of SQA TeamTest software desired; experience with PeopleSoft applications and/or the Windows NT environment a plus. Responsibilities include ensuring a consistently high level of quality on delivered software applications through the development and implementation of department-wide QA standards and procedures. Financial Services Division.

DD 0493. CENTRAL SHOPS CLERK A - (term appointment) Under minimum supervision and administrative direction, performs semi-standard clerical functions in assigned areas of Central Shops Division. Requires specialized knowledge or skill in clerical functions and the use of computers. Works from written or oral directions. Qualifications typically consist of two years' relevant training or equivalent job-related training skills. (reposting) Central Shops Division.